IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT:	Robert N. Falco	)
		)
SERIAL NUMBER:	09/226,467	) Group Art Unit
		) 2837
FILED:	January 1, 1999	)
		) Examiner:
FOR:	DETECTABLE EARPLUG AND METHOD OF MANUFACTURE THEREOF	) K. Dang

APPEAL BRIEF

(1) REAL PARTY IN INTEREST

The real party in interest is Cabot Safety Intermediate Corporation.

(2) STATUS OF CLAIMS

Claims 1-23 remain pending in the present application. A clean copy of claims 1-23 are attached hereto as Appendix 1. A Final Office Action issued on February 14, 2001, rejecting claims 1-23. Applicant appeals from the final rejection of these claims.

(3) STATUS OF AMENDMENTS

Claims 1-21 were filed with the application on January 7, 1999. Claims 1, 7 and 16 were amended, and claims 22 and 23 were added in the amendment dated October 8, 1999. Claims 1, 7 and 16 were again amended in the amendment dated April 3, 2000. A request for Continued Prosecution was made on December 12, 2000. A Final Office Action issued on February 14, 2001, finally rejecting claims 1-23.

(4) SUMMARY OF INVENTION

Disclosed is a unique earplug 10 including a foam body 14 having a detectable insert 12 completely encased by the foam body 14. The earplug 10 is manufactured by forming a channel 30 in the foam body 14 and placing the detectable insert 12 into the channel 30. The channel 30 is formed by deforming the foam body 14 using a punch 20. The foam body 14 is made from a slow recovery foam which returns to its original shape, and thereby encapsulating the detectable insert 12 within the foam body 14. In an alternative embodiment, the insert 12 is projected into

the foam body 14 and the foam body 14 recovers to encapsulate the insert 12. (See FIGS. 1-5, generally; see the specification at page 1, lines 11-17).

Such an earplug, with the encapsulated detectable insert, ensures that the earplug, if lost, does not become intermixed with a product and thereby cause contamination. At the same time, by completely encapsulating the insert, the insert does not take up any of the exterior surface area of the earplug, thereby making the plug perform functionally and aesthetically as well as conventional earplugs with the added detection ability. (See the specification at page 4, lines 18-22).

(5) ISSUES

(1) Claims 1-23 were rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over U.S. Patent No. 4,253,452 to Powers et al. (hereinafter "Powers") in view of U.S. Patent No. 4,936,411 to Leonard (hereinafter "Leonard").

(6) GROUPING OF CLAIMS

The claims herein stand or fall together with the exception of claims 1, 7, and 13-16. Claim 1 describes the earplug and is distinguished according to the below arguments. Claims 7 and 13-16 describe various embodiments of a method of manufacturing an earplug. As described below, claims 7 and 13-16 are distinctly patentable in that each of those claims include limitations not found in the prior art.

(7) ARGUMENT

(a) Rejection of claims 1-23 under 35 U.S.C. 103(a) over Powers in view of Leonard

Claims 1-23 were rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over U.S. Patent No. 4,253,452 to Powers et al. (hereinafter "Powers") in view of U.S. Patent No. 4,936,411 to Leonard (hereinafter "Leonard").

Specifically, the Examiner stated that Powers discloses the elements of claims 1-23 except for the fact that Powers does not teach or suggest the use of a detectable insert or the manufacture of an earplug having a detectable insert.

The Examiner is correct in the fact that Powers does not relate in any way to earplugs formed with detectable components. Powers discloses corded earplugs and a method of attaching the cord. Powers uses a piercing tool or "bodkin" thrust at a high velocity into the center of the larger end face of the plug remaining there for 3-4 seconds. The bodkin is removed and the free end of cord is inserted into preformed hole. *Powers does not teach or suggest a detectable insert encapsulated within a foam body such that the foam body completely surrounds the detectable insert, as is required by the Claims.*

The Examiner also attempted to combine the teachings of Powers with Leonard. However, the Examiner is incorrect in attempting to relate Leonard to Powers. Leonard teaches taking a metal ball and inserting it into a specially formed channel with wall contouring that retains the metal ball in the stem of the earplug. *Leonard neither teaches nor suggests encapsulation of a detectable insert within a foam body such that the foam body completely surrounds the detectable insert, as is required by the Claims.*

The proposed combination of references is insufficient to make out a prima facie case of obviousness. MPEP, section 706.02(j) states:

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a *reasonable expectation of success*. Finally, the prior art reference (or references when combined) *must teach or suggest all the claim limitations*. **The teachings or suggestion to make the claimed combination and the reasonable expectation of success *must both be found in the prior art* and not based on the applicant's disclosure.** *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991) (emphasis added).

First, there is no suggestion or motivation to combine Powers and Leonard. Leonard actually teaches away from Powers by requiring that the earplug have a channel and by requiring that the detectible insert have a diameter large enough so that the insert will be restricted from coming out of the channel during normal use. Powers does not contemplate detectible inserts (or any other inserts). Because there is no motivation to combine Leonard and Powers, the rejection is improper.

Second, the proposed combination does not teach or suggest all of the claim limitations. Neither reference teaches a detectible insert encapsulated within the foam body, the foam body completely surrounding the detectible insert. In an attempt to meet the limitations of claims 1, 7 and 16, the Examiner, in Paper No. 19, page 3, line 16, is improperly attempting to assert that Leonard teaches ***encapsulation*** of a detectable insert in a body such that the detectable insert is ***completely*** surrounded by the body. This is not the case. As discussed above, Leonard actually

teaches away from such a configuration and method. Additionally, as discussed above, Powers does not (even if combination were proper) make up for the deficiencies of Leonard with regard to claims 1, 7 and 16. A prima facie case of obviousness cannot be established because the prior art fails to teach or suggest this limitation.

Also with regard to various dependent claims, Applicant's dependent claim 13 recites inserting a punch into the foam body and its dependent claim 15 recites chilling the punch. Powers neither discloses use of a channel-forming punch nor chilling of its piercing tool. Applicant has shown that chilling reduces dwell time and increases manufacturing efficiency, clear improvements over the existing art which are not obvious from the Powers and Leonard references. For these additional reasons, the proposed combination of Leonard with Powers fails.

Further to the above discussion with regard to independent claims 1 and 7, Applicant's claim 16 also teaches projecting the insert into the foam body at a predetermined trajectory and speed. The detectable insert is projected into the foam body and the foam body is allowed to encapsulate the insert so that the detectable insert is completely surrounded by the foam body. The references are silent (no teaching or suggestion) on *projecting a detectable insert into a foam body* and allowing the foam body to encapsulate the detectable insert so that the insert is completely surrounded by the foam body. For these additional reasons, Claim 16 and claims 17-21, dependent thereon, should be allowable.

Applicant is also unclear whether the Examiner is still using the Carr reference in rejecting the claims. However, the Carr reference does not teach or suggest any aspect of the present invention as it only teaches molding a plug with a hole formed therein. The hole is formed to assist in the demolding process and to create a comfort cavity. Carr mentions no other

benefits to providing the hole in the foam body. Even assuming that combination of Carr with the above references were proper (Combination is not proper for the same reasons as above), Carr does nothing to fill the deficiencies of the above-cited art.

Accordingly, the references cited in the Office Action do not render obvious that which the Applicant deems to be the invention.

(8) CONCLUSION

The rejections of the claims are in error and should be reversed.

If there are any additional charges with respect to this Amendment or otherwise, please charge them to Deposit Account No. 06-1130 maintained by Applicant's Attorneys.

Respectfully submitted,
ROBERT N. FALCO

CANTOR COLBURN, LLP
Applicant's Attorneys

By: H.M. Bedingfield
Registration No. 44,530
Customer No. 23413

Date: September 28, 2001
Address: 55 Griffin Road South, Bloomfield, Connecticut 06002
Telephone: (860) 286-2929

APPENDIX I

CLAIM 1. An earplug comprising:

a foam body free of detectable material; and

a detectable insert encapsulated within said foam body, said foam body completely surrounding said detectable insert.

CLAIM 2. The earplug of claim 1 wherein:

said foam body is made from a slow recovery foam.

CLAIM 3. The earplug of claim 1 wherein:

said detectable insert includes metal.

CLAIM 4. The earplug of claim 1 wherein:

said detectable insert includes a magnetic material.

CLAIM 5. The earplug of claim 1 wherein:

said detectable insert includes an x-ray detectable material.

CLAIM 6. The earplug of claim 1 wherein:

substantially an entire surface of said insert is in contact with said foam body.

CLAIM 7. A method of manufacturing an earplug comprising:

providing an earplug having a foam body free of detectable material;

forming a channel in said foam body;

placing a detectable insert in said channel; and

allowing said foam body to encapsulate said detectable insert so that said foam body completely surrounds said detectable insert.

CLAIM 8. The method of claim 7 wherein:

said foam body is made from a slow recovery foam.

CLAIM 9. The method of claim 7 wherein:

said detectable insert includes metal.

CLAIM 10. The method of claim 7 wherein:

said detectable insert includes a magnetic material.

CLAIM 11. The method of claim 7 wherein:

said detectable insert includes an x-ray detectable material.

CLAIM 12. The method of claim 7 wherein:

substantially an entire surface of said insert is in contact with said foam body.

CLAIM 13. The method of claim 7 wherein:

said channel is formed by inserting a punch in said foam body.

CLAIM 14. The method of claim 7 wherein:

said foam body is chilled.

CLAIM 15. The method of claim 13 wherein:

said channel is formed by a punch and said punch is chilled.

CLAIM 16. A method of manufacturing an earplug comprising:

obtaining an earplug having a foam body;

projecting a detectable insert into said foam body at a predetermined trajectory and speed; and

allowing said foam body to encapsulate said insert so that said foam body completely surrounds said detectable insert.

CLAIM 17. The method of claim 16 wherein:

said foam body is made from a slow recovery foam.

CLAIM 18. The method of claim 16 wherein:

said detectable insert includes metal.

CLAIM 19. The method of claim 16 wherein:

said detectable insert includes a magnetic material.

CLAIM 20. The method of claim 16 wherein:

said detectable insert includes an x-ray detectable material.

CLAIM 21. The method of claim 16 wherein:

substantially an entire surface of said insert is in contact with said foam body.

CLAIM 22. The earplug of claim 1 wherein:

the detectable insert comprises a spherical ball having an outer surface and the foam body has an outer surface, wherein the foam body is free of detectable material from the outer surface of the spherical ball to the outer surface of the foam body.

CLAIM 23. The earplug of claim 1, wherein:

the detectable insert is selectively isolated in a region defined within the foam body.